XEC-500

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

SPECIFICATIONS

Crossover frequency
HI-PASS (for FRONT and REAR outputs): FLAT, 80, 120, 180 Hz
LOW-PASS (for SUB WOOFER outputs): 50, 80, 120, 180 Hz
Gain 0 dB
+6 dB (Sub-woofer)
Harmonic distortion
less than 0.005%
Signal-to-noise ratio
more than 105 dB
Frequency response
5 Hz to 100 kHz ($\pm^{0}_{3}$ dB)
Crossover slope −12 dB/oct
−18 dB/oct (Sub-woofer)
Bass boost 0 to +10 dB (40 Hz)

General

Inputs Remote control input
Power input
Line input (phono jack 4)
Outputs Line outputs (phono jack 6)
Power requirements
12 V DC car battery (negative ground)
Current drain 220 mA
Input remote current
4 mA
Mounting dimensions
Approx. 178 × 25 × 110 mm (w/h/d)
Weight Approx. 0.6 kg
Accessories supplied
Mounting hardware (1 set)

Design and specifications subject to change without notice.

MICROFILM

ELECTRONIC CROSSOVER NETWORK

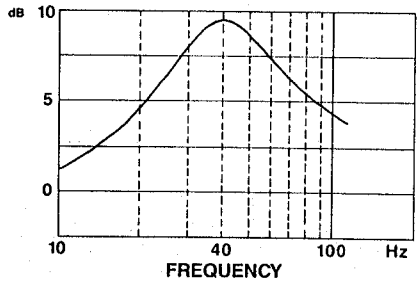
SONY®

Features

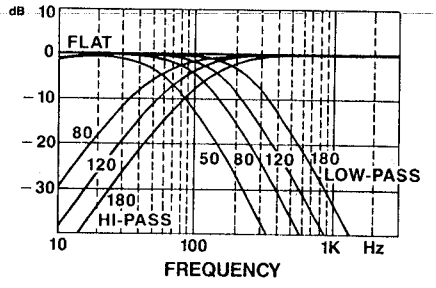
- Linear phase filters* (Bessel function type) realize natural and equal sound levels in and around the passband frequency.
- The sound balance of front and rear can be adjusted without affecting a sub-woofer sound.
- 40 Hz low boost control allows dynamic bass reproduction.

*Linear phase filters (Bessel function type)
Most of the channel dividers currently available employ flat response filters (Butterworth type). The group delay characteristic of this type of filters is much worse than that of the linear phase filters, and this causes transient distortion in the audio signals at each filter's crossover frequency. To reduce that distortion and to obtain hi-fi sound, linear phase filters (Bessel function type) are used for the XEC-500.

Low Boost Response Curve



Crossover Point Response Curve



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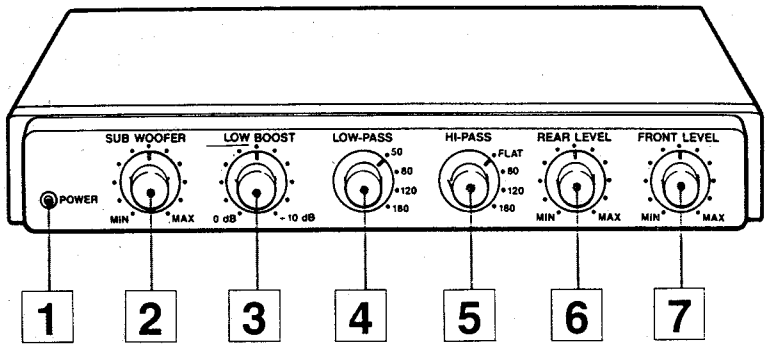
SECTION 1
GENERAL

Location and Function of Controls

Front panel



1 POWER indicator

2 SUB WOOFER output level control
Turn to adjust the output level of SUB WOOFER OUTPUT.

3 LOW BOOST level control
Turn to boost the frequencies around 40 Hz at the maximum of 10 dB.

4 LOW-PASS (low-band crossover point) selector
Turn to select the crossover frequency above which will be cut off.

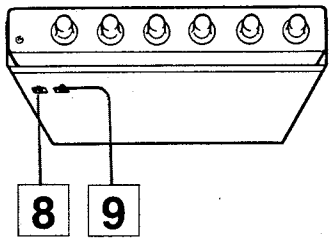
5 HI-PASS (high-band crossover point) selector
Turn to select the crossover frequency below which will be cut off.

6 REAR LEVEL control
Turn to adjust the output level of REAR OUTPUT.

7 FRONT LEVEL control
Turn to adjust the output level of FRONT OUTPUT.

Location and Function of Controls

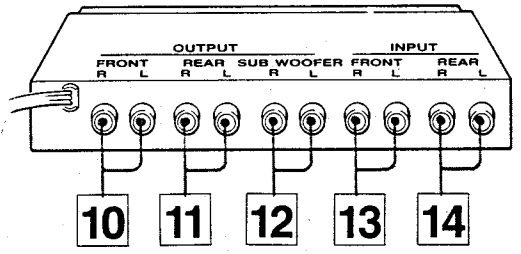
Bottom



8 SUB WOOFER F & R/R (front and rear/rear) selector
Use this to select the output from SUB WOOFER OUTPUT. Set it to F & R to obtain the summation of signals from FRONT INPUT and REAR INPUT, or set it to R to obtain only signals from REAR INPUT.

9 SUB WOOFER ST/MONO (stereo/monaural) selector
Set it to MONO to obtain monaural output from SUB WOOFER OUTPUT. In this case, do not set LOW-PASS to 180. The balance of a sound may be affected if you do so.

Rear



10 FRONT (R/L) OUTPUT connectors

11 REAR (R/L) OUTPUT connectors

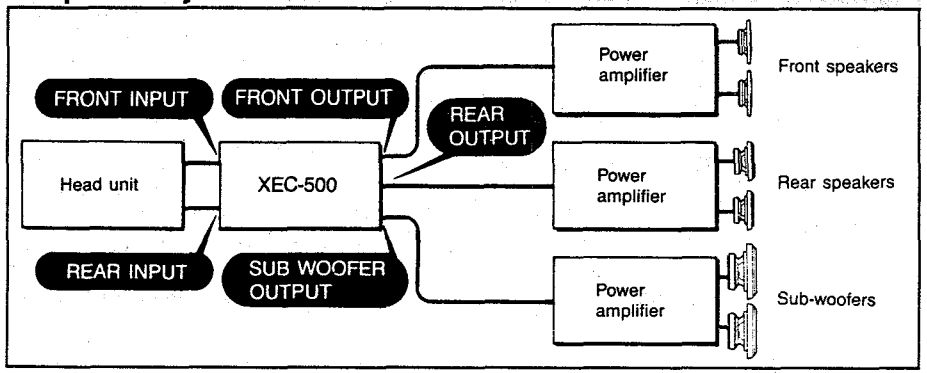
12 SUB WOOFER (R/L) OUTPUT connectors

13 FRONT (R/L) INPUT connectors

14 REAR (R/L) INPUT connectors

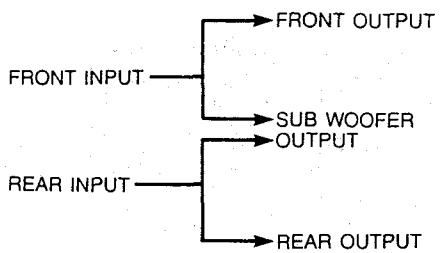
Some Examples of System Configuration

6-speaker system

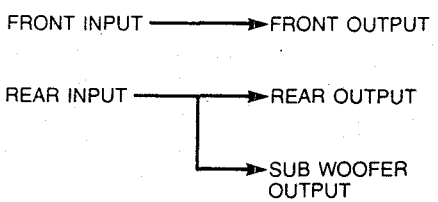


This system consists of the head unit with two pre-amplifier outputs, and three power amplifiers and three pairs of speakers. In this system, the signals flow as follows:

- **When SUB WOOFER F & R/R is set to F & R**

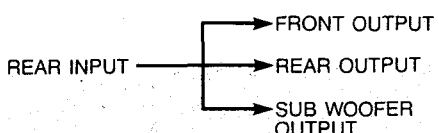


- **When SUB WOOFER F & R/R is set to R**



To use the head unit equipped with only one pre-amplifier output

Connect the output of the head unit to REAR INPUT. The signals flow as follows:

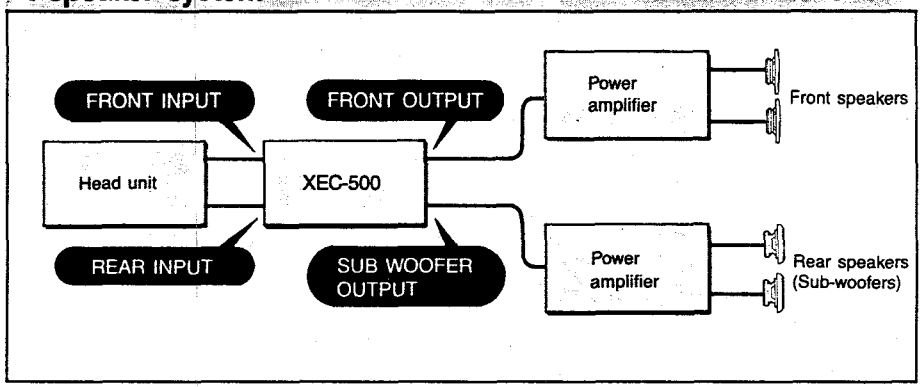


Note

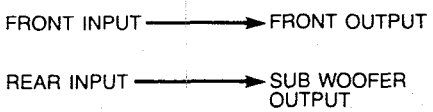
Be sure not to connect the output of the head unit to FRONT INPUT when the head unit with only one pre-amplifier output is used. If you do so, the sound will not be heard.

Some Examples of System Configuration

4-speaker system



This system consists of the head unit with two pre-amplifier outputs, and two power amplifiers and two pairs of speakers. In this system, set SUB WOOFER F & R/R to R. By setting so, the level of the rear speakers (sub-woofers) can be adjusted with the fader control of the head unit. The signals flow as follows:



When only one rear speaker is used

SUB WOOFER ST/MONO should be set to MONO. In this case, do not set LOW-PASS to 180. The balance of a sound may be affected if you do so.

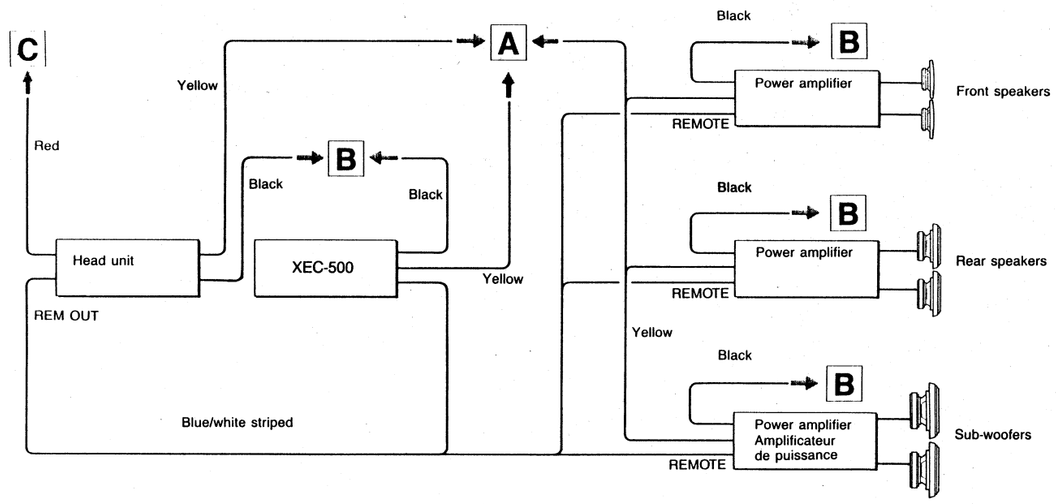
Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the yellow power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal.
- **Run all ground wires to a common ground point.**

Note on amplifier and program source connection
The red jacks of the unit are for right-channel connection and the white jacks for the left-channel.

Power Connections Example

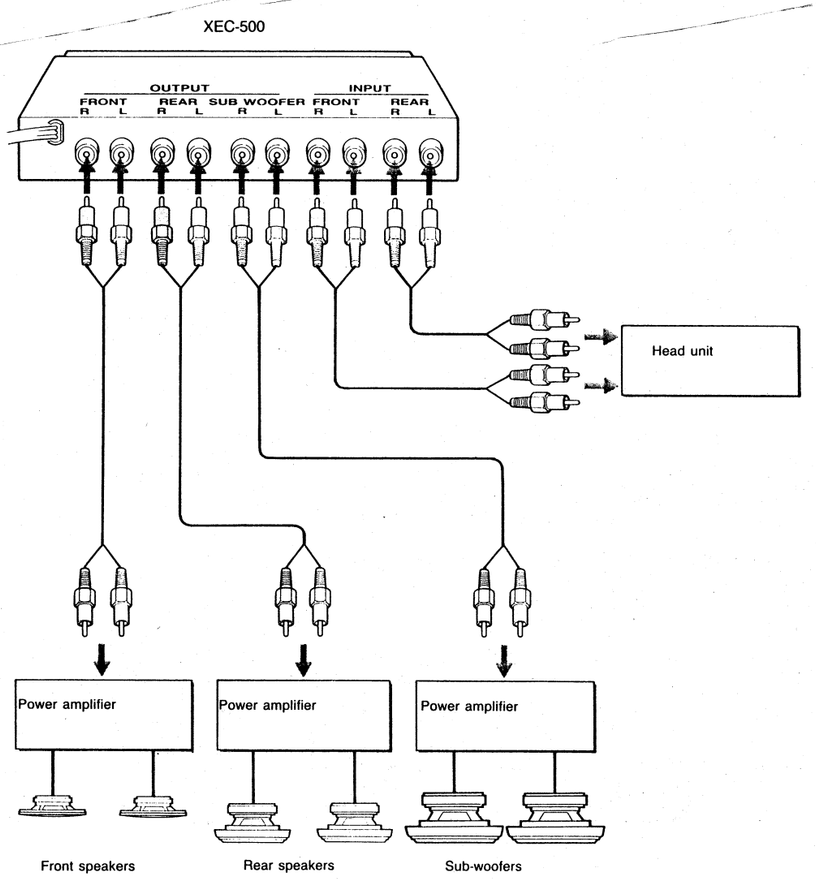


A To the ⊕ (positive) terminal of the car battery

B To a metal part of the car

C To the ⊕ (positive) terminal which is energized when the ignition key is turned in the accessory position

Signal Connections Example



Installation

Precautions

Use the supplied mounting hardware.

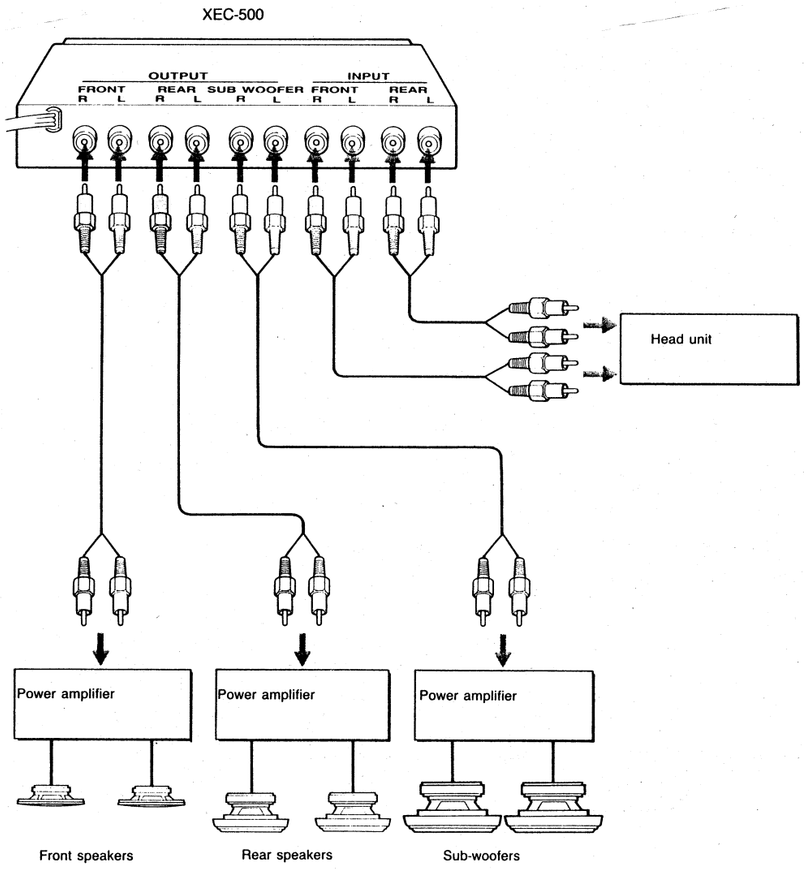
1 Mark the locations of the holes on the bottom of the dashboard using the part (F) as a template.

Notes
- Be sure to use the supplied bolts (B) for mounting the part (F) on the unit. Longer bolts will damage the unit.
- Be careful not to damage wiring or equipment on the other side of the firewall.

B To a metal part of the car

C To the ⊕ (positive) terminal which is energized when the ignition key is turned in the accessory position

Signal Connections Example

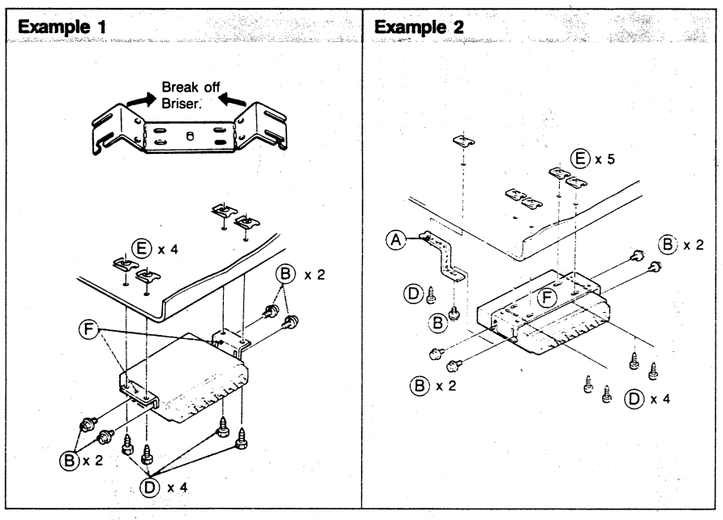


Installation

Precautions

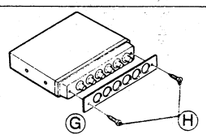
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or from hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting Example



To Avoid Accidental Operation

Attach the supplied protection plate (G) to the front panel of the unit.



Use the supplied mounting hardware.

1 Mark the locations of the holes on the bottom of the dashboard using the part (F) as a template.

2 Drill 3 mm ($^1/_8$ in.) bolt holes.

3 Secure the pieces of the part (F) which are broken off to the bottom of the dashboard*.

4 Secure the unit to the part (F) .

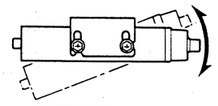
* If the dashboard or the firewall is thin or made of plastic or a similar material, secure the unit with tapping screws and tinnerman clips (E) . If it is made of metal plate, the tinnerman clips are not necessary.

The unit can be installed inside the dashboard using an optional in-dash installation kit.

Notes

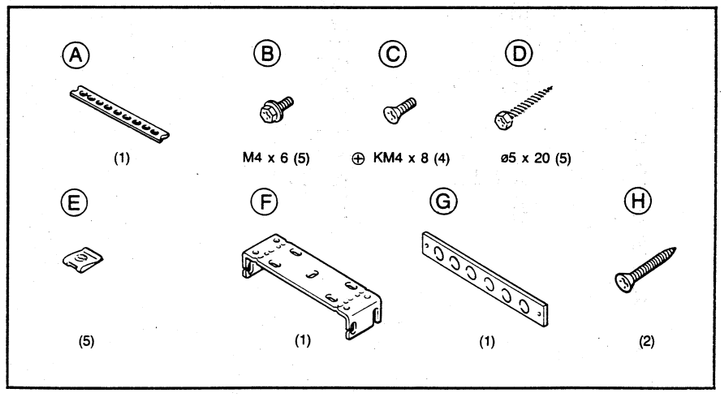
- Be sure to use the supplied bolts (B) for mounting the part (F) on the unit. Longer bolts will damage the unit.
- Be careful not to damage wiring or equipment on the other side of the firewall.

The mounting position, height and angle can be adjusted as illustrated below.



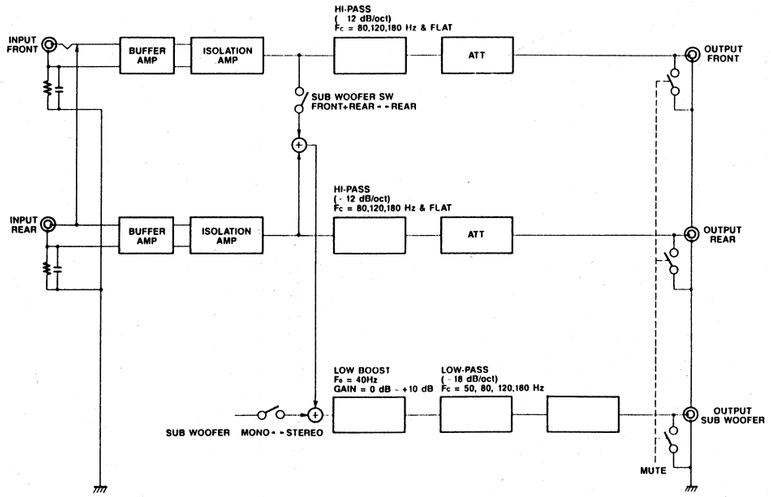
Supplied Mounting Hardware

The letters in the list are keyed to those in the instructions.



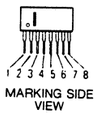
SECTION 2
DIAGRAMS

2-1. BLOCK DIAGRAM



- **Semiconductor Lead Layouts**

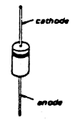
LM2904S
NJM4580L



MARKING SIDE VIEW

DTA114ES
2SC3623A-LK

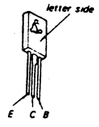
GL-2NG1



RC4558S

MARKING SIDE VIEW

2SB649A



DTC-343TS
2SA1175-FEK
2SC2735-FEK

RD3.9ES-B2
RD10ES-B2
RD15ES-B2
1SS119
1SR139-100

Note on Schematic Diagram:

Note:

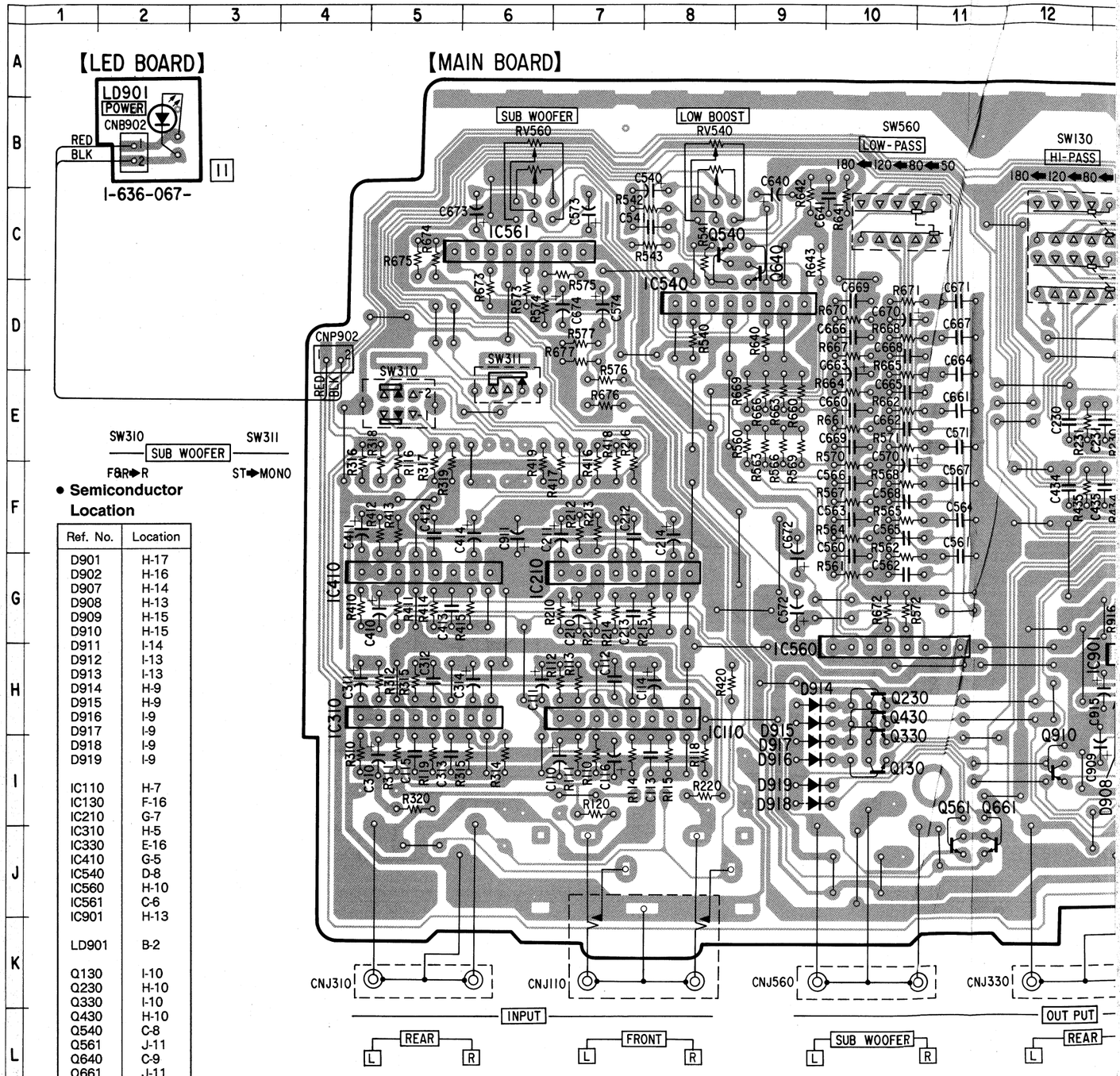
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.
- B+ : B + Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Wavefroms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : LINE IN

Note on Printed Wiring Board:

Note:

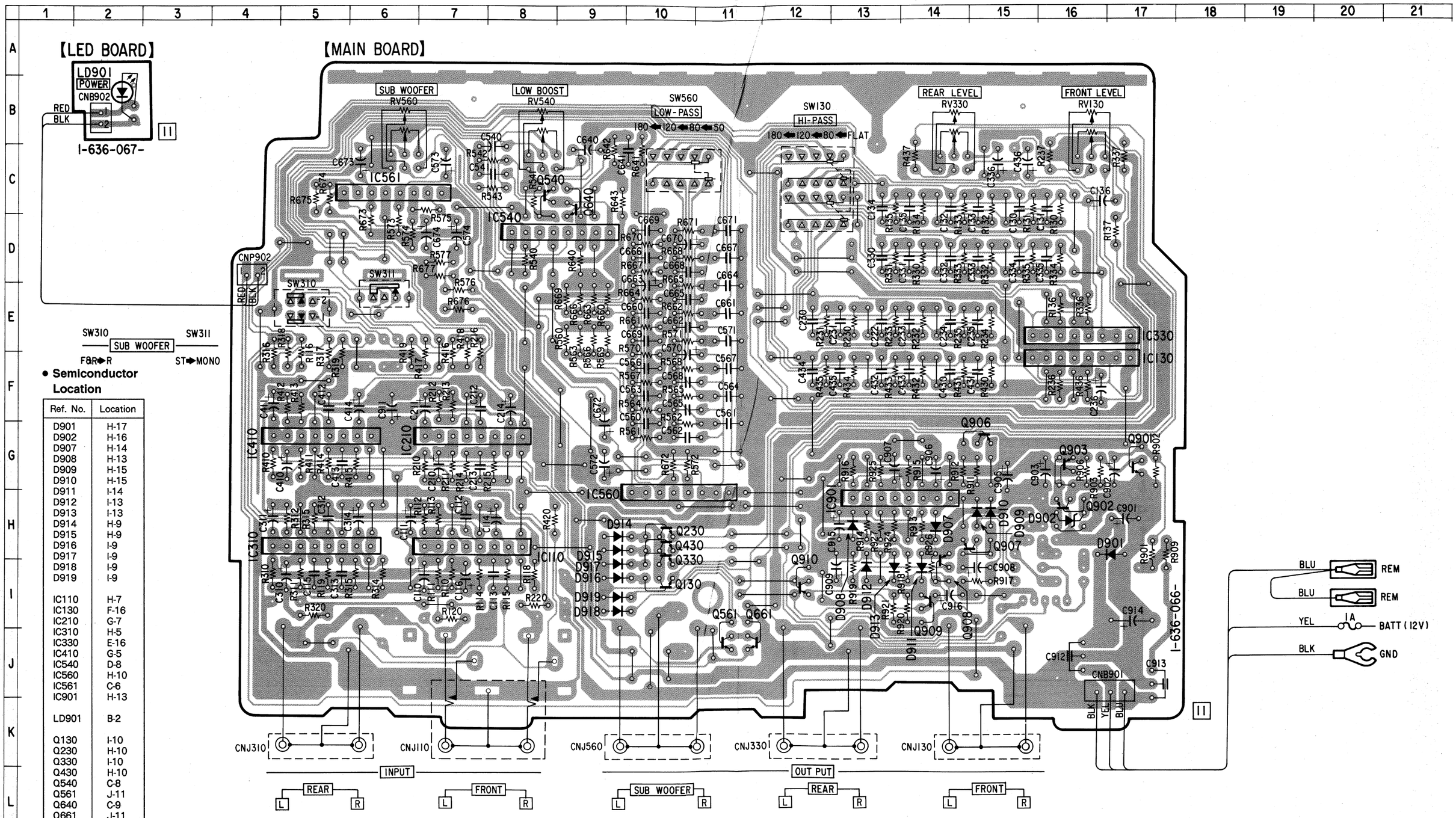
- o——— : parts extracted from the component side.
- ▒▒▒ : Carbon pattern.

2-2. PRINTED WIRING BOARD



- **Semiconductor Location**

Ref. No.	Location
D901	H-17
D902	H-16
D907	H-14
D908	H-13
D909	H-15
D910	H-15
D911	I-14
D912	I-13
D913	I-13
D914	H-9
D915	H-9
D916	I-9
D917	I-9
D918	I-9
D919	I-9
IC110	H-7
IC130	F-16
IC210	G-7
IC310	H-5
IC330	E-16
IC410	G-5
IC540	D-8
IC560	H-10
IC561	C-6
IC901	H-13
LD901	B-2
Q130	I-10
Q230	H-10
Q330	I-10
Q430	H-10
Q540	C-8
Q561	J-11
Q640	C-9
Q661	J-11
Q901	G-17
Q902	H-16
Q903	G-16
Q906	G-15
Q907	H-15
Q908	I-14
Q909	I-14
Q910	I-12



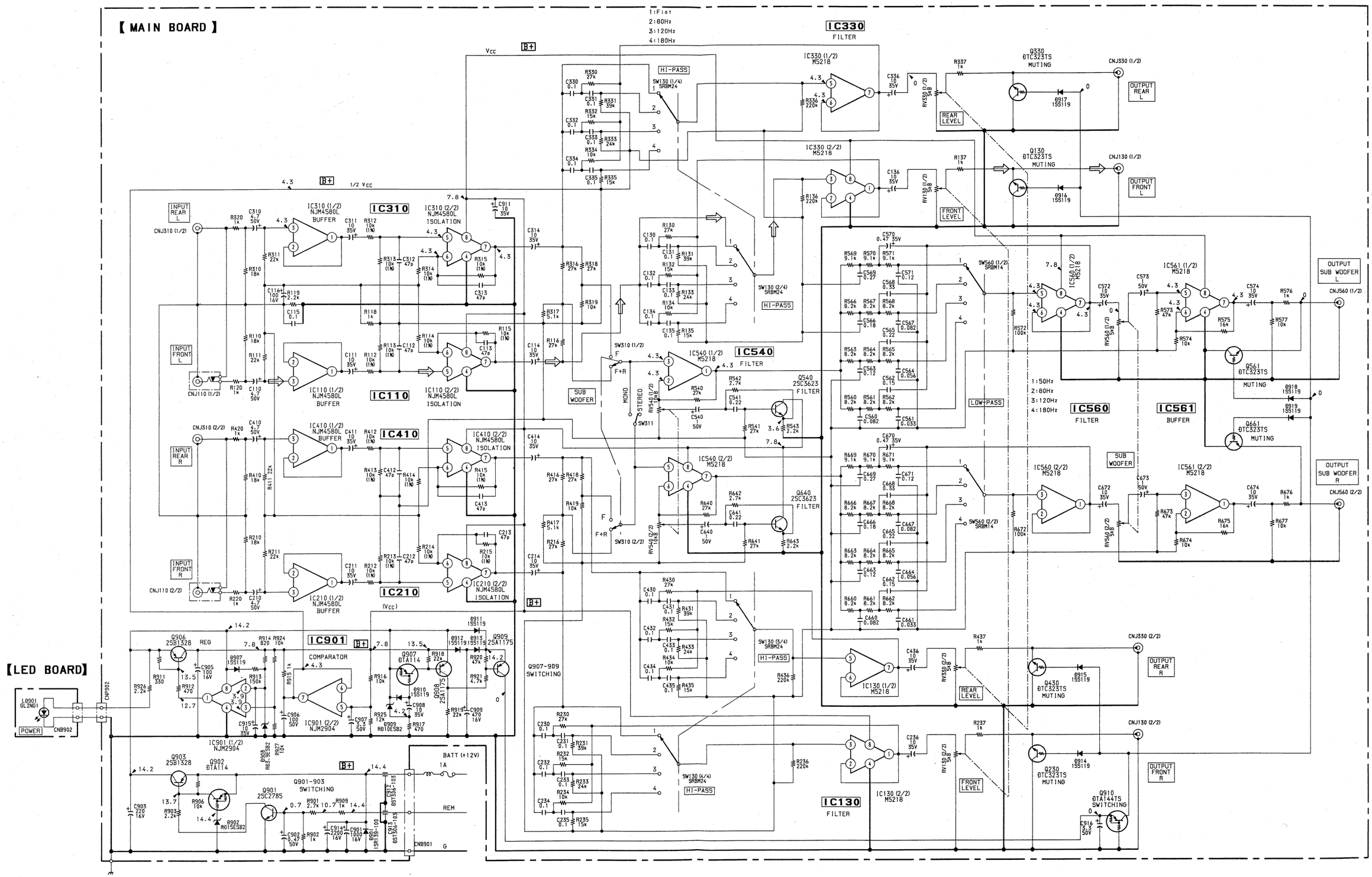
SW310 — SUB WOOFER — SW311

F&R ⇔ R ST ⇔ MONO

- **Semiconductor Location**

Ref. No.	Location
D901	H-17
D902	H-16
D907	H-14
D908	H-13
D909	H-15
D910	H-15
D911	I-14
D912	I-13
D913	I-13
D914	H-9
D915	H-9
D916	I-9
D917	I-9
D918	I-9
D919	I-9
IC110	H-7
IC130	F-16
IC210	G-7
IC310	H-5
IC330	E-16
IC410	G-5
IC540	D-8
IC560	H-10
IC561	C-6
IC901	H-13
LD901	B-2
Q130	I-10
Q230	H-10
Q330	I-10
Q430	H-10
Q540	C-8
Q561	J-11
Q640	C-9
Q661	J-11
Q901	G-17
Q902	H-16
Q903	G-16
Q906	G-15
Q907	H-15
Q908	I-14
Q909	I-14
Q910	I-12

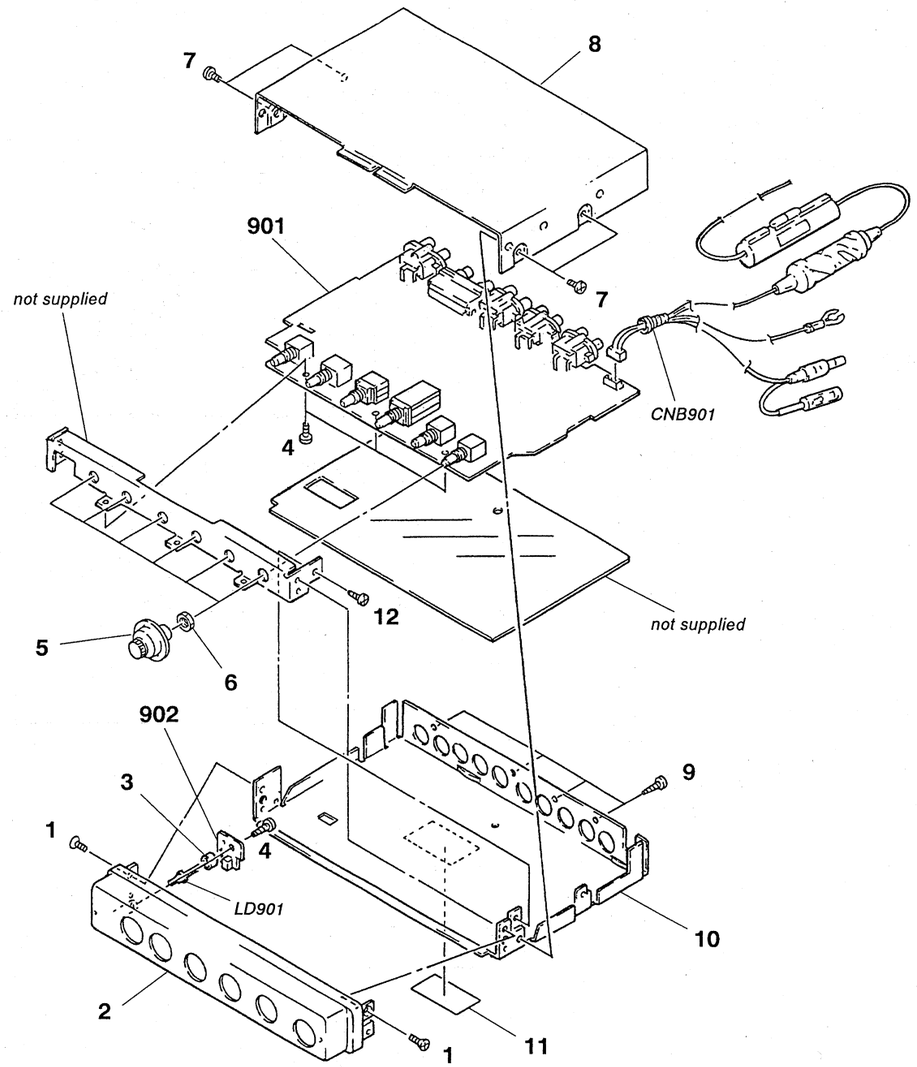
2-3. SCHEMATIC DIAGRAM



SECTION 3
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color



No.	Part No.	Description	Remarks
1	7-621-592-10	SCREW +K 2.6X8	
2	3-362-529-01	PANEL, FRONT	
3	*3-362-800-01	HOLDER, LED	
4	7-685-133-19	SCREW +P 2.6X6 TYPE1	
5	3-362-519-01	KNOB	
6	4-847-312-00	NUT (M7)	
7	7-621-773-95	SCREW +B 2.6X6	
8	*3-350-792-01	COVER	
9	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
10	*3-362-517-01	CHASSIS	
11	*3-350-786-01	(US,AEP,UK,E)....LABEL, MODEL NUMBER	
	*3-350-787-01	(Canadian).....LABEL, MODEL NUMBER	
	*3-350-788-01	(West Germany)...LABEL, MODEL NUMBER	
12	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
901	*A-3273-214-A	MOUNTED PCB, MAIN	
902	*1-636-067-11	PC BOARD, LED	
CNB901	1-590-098-11	CORD (WITH CONNECTOR)	
LD901	8-719-987-66	DIODE GL-2NG1	

SECTION 4
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

Ref.No.	Part No.	Description			
901	*A-3273-214-A	MOUNTED PCB, MAIN			
902	*1-636-067-11	PC BOARD, LED			
C110	1-123-369-00	ELECT	4.7MF	20%	50V
C111	1-123-356-00	ELECT	10MF	20%	35V
C112	1-101-880-00	CERAMIC	47PF	5%	50V
C113	1-101-880-00	CERAMIC	47PF	5%	50V
C114	1-123-356-00	ELECT	10MF	20%	35V
C115	1-136-165-00	FILM	0.1MF	5%	50V
C116	1-123-333-00	ELECT	100MF	20%	16V
C130	1-136-742-11	FILM	0.1MF	5%	50V
C131	1-136-742-11	FILM	0.1MF	5%	50V
C132	1-136-742-11	FILM	0.1MF	5%	50V
C133	1-136-742-11	FILM	0.1MF	5%	50V
C134	1-136-742-11	FILM	0.1MF	5%	50V
C135	1-136-742-11	FILM	0.1MF	5%	50V
C136	1-123-356-00	ELECT	10MF	20%	35V
C210	1-123-369-00	ELECT	4.7MF	20%	50V
C211	1-123-356-00	ELECT	10MF	20%	35V
C212	1-101-880-00	CERAMIC	47PF	5%	50V
C213	1-101-880-00	CERAMIC	47PF	5%	50V
C214	1-123-356-00	ELECT	10MF	20%	35V
C230	1-136-742-11	FILM	0.1MF	5%	50V
C231	1-136-742-11	FILM	0.1MF	5%	50V
C232	1-136-742-11	FILM	0.1MF	5%	50V
C233	1-136-742-11	FILM	0.1MF	5%	50V
C234	1-136-742-11	FILM	0.1MF	5%	50V
C235	1-136-742-11	FILM	0.1MF	5%	50V
C236	1-123-356-00	ELECT	10MF	20%	35V
C310	1-123-369-00	ELECT	4.7MF	20%	50V
C311	1-123-356-00	ELECT	10MF	20%	35V
C312	1-101-880-00	CERAMIC	47PF	5%	50V
C313	1-101-880-00	CERAMIC	47PF	5%	50V
C314	1-123-356-00	ELECT	10MF	20%	35V
C330	1-136-742-11	FILM	0.1MF	5%	50V
C331	1-136-742-11	FILM	0.1MF	5%	50V
C332	1-136-742-11	FILM	0.1MF	5%	50V
C333	1-136-742-11	FILM	0.1MF	5%	50V
C334	1-136-742-11	FILM	0.1MF	5%	50V
C335	1-136-742-11	FILM	0.1MF	5%	50V
C336	1-123-356-00	ELECT	10MF	20%	35V
C410	1-123-369-00	ELECT	4.7MF	20%	50V
C411	1-123-356-00	ELECT	10MF	20%	35V
C412	1-101-880-00	CERAMIC	47PF	5%	50V
C413	1-101-880-00	CERAMIC	47PF	5%	50V

Ref.No.	Part No.	Description			
C414	1-123-356-00	ELECT	10MF	20%	35V
C430	1-136-742-11	FILM	0.1MF	5%	50V
C431	1-136-742-11	FILM	0.1MF	5%	50V
C432	1-136-742-11	FILM	0.1MF	5%	50V
C433	1-136-742-11	FILM	0.1MF	5%	50V
C434	1-136-742-11	FILM	0.1MF	5%	50V
C435	1-136-742-11	FILM	0.1MF	5%	50V
C436	1-123-356-00	ELECT	10MF	20%	35V
C540	1-123-380-00	ELECT	1MF	20%	50V
C541	1-136-744-11	FILM	0.22MF	5%	50V
C560	1-136-164-00	FILM	0.082MF	5%	50V
C561	1-136-740-11	FILM	0.033MF	5%	50V
C562	1-136-743-11	FILM	0.15MF	5%	50V
C563	1-136-837-11	FILM	0.12MF	5%	50V
C564	1-136-835-11	FILM	0.056MF	5%	50V
C565	1-136-744-11	FILM	0.22MF	5%	50V
C566	1-136-838-11	FILM	0.18MF	5%	50V
C567	1-136-164-00	FILM	0.082MF	5%	50V
C568	1-136-840-11	FILM	0.33MF	5%	50V
C569	1-136-839-11	FILM	0.27MF	5%	50V
C570	1-123-379-00	ELECT	0.47MF	20%	50V
C571	1-136-837-11	FILM	0.12MF	5%	50V
C572	1-123-356-00	ELECT	10MF	20%	35V
C573	1-123-380-00	ELECT	1MF	20%	50V
C574	1-123-356-00	ELECT	10MF	20%	35V
C640	1-123-380-00	ELECT	1MF	20%	50V
C641	1-136-744-11	FILM	0.22MF	5%	50V
C660	1-136-164-00	FILM	0.082MF	5%	50V
C661	1-136-740-11	FILM	0.033MF	5%	50V
C662	1-136-743-11	FILM	0.15MF	5%	50V
C663	1-136-837-11	FILM	0.12MF	5%	50V
C664	1-136-835-11	FILM	0.056MF	5%	50V
C665	1-136-744-11	FILM	0.22MF	5%	50V
C666	1-136-838-11	FILM	0.18MF	5%	50V
C667	1-136-164-00	FILM	0.082MF	5%	50V
C668	1-136-840-11	FILM	0.33MF	5%	50V
C669	1-136-839-11	FILM	0.27MF	5%	50V
C670	1-123-379-00	ELECT	0.47MF	20%	50V
C671	1-136-837-11	FILM	0.12MF	5%	50V
C672	1-123-356-00	ELECT	10MF	20%	35V
C673	1-123-380-00	ELECT	1MF	20%	50V
C674	1-123-356-00	ELECT	10MF	20%	35V
C901	1-124-360-00	ELECT	1000MF	20%	16V
C902	1-123-379-00	ELECT	0.47MF	20%	50V
C903	1-123-321-00	ELECT	220MF	20%	16V

Ref.No.	Part No.	Description			
C905	1-123-333-00	ELECT	100MF	20%	16V
C906	1-126-101-11	ELECT	100MF	20%	10V
C907	1-123-382-00	ELECT	3.3MF	20%	50V
C908	1-123-356-00	ELECT	10MF	20%	35V
C909	1-126-103-11	ELECT	470MF	20%	16V
C911	1-123-356-00	ELECT	10MF	20%	35V
C912	1-424-228-11	FILTER, NOISE			
C913	1-424-228-11	FILTER, NOISE			
C914	1-124-343-00	ELECT	2200MF	20%	16V
C915	1-123-356-00	ELECT	10MF	20%	35V
C916	1-123-382-00	ELECT	3.3MF	20%	50V
CNB901	1-590-098-11	CORD (WITH CONNECTOR)			
CNJ110	1-580-179-11	JACK, PIN 2P (INPUT FRONT L/R)			
CNJ130	1-580-282-11	JACK, PIN 2P (OUTPUT FRONT L/R)			
CNJ310	1-580-282-11	JACK, PIN 2P (INPUT REAR L/R)			
CNJ330	1-580-282-11	JACK, PIN 2P (OUTPUT REAR L/R)			
CNJ560	1-580-282-21	JACK, PIN 2P (OUTPUT SUBWOOFER L/R)			
CNP902*	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
D901	8-719-974-59	DIODE 1SR139-100			
D902	8-719-110-41	DIODE RD15ESB2			
D907	8-719-911-19	DIODE 1SS119			
D908	8-719-109-72	DIODE RD3.9ESB2			
D909	8-719-110-17	DIODE RD10ESB2			
D910	8-719-911-19	DIODE 1SS119			
D911	8-719-911-19	DIODE 1SS119			
D912	8-719-911-19	DIODE 1SS119			
D913	8-719-911-19	DIODE 1SS119			
D914	8-719-911-19	DIODE 1SS119			
D915	8-719-911-19	DIODE 1SS119			
D916	8-719-911-19	DIODE 1SS119			
D917	8-719-911-19	DIODE 1SS119			
D918	8-719-911-19	DIODE 1SS119			
D919	8-719-911-19	DIODE 1SS119			
IC110	8-759-710-73	IC NJM4580L			
IC130	8-759-981-95	IC RC4558S			
IC210	8-759-710-73	IC NJM4580L			
IC310	8-759-710-73	IC NJM4580L			
IC330	8-759-981-95	IC RC4558S			
IC410	8-759-710-73	IC NJM4580L			
IC540	8-759-981-95	IC RC4558S			
IC560	8-759-981-95	IC RC4558S			
IC561	8-759-981-95	IC RC4558S			
IC901	8-759-981-74	IC NJM2904S			
LD901	8-719-987-66	DIODE GL-2NG1			
Q130	8-729-905-50	TRANSISTOR DTC343TS			
Q230	8-729-905-50	TRANSISTOR DTC343TS			
Q330	8-729-905-50	TRANSISTOR DTC343TS			
Q430	8-729-905-50	TRANSISTOR DTC343TS			
Q540	8-729-141-30	TRANSISTOR 2SC3623A-LK			
Q561	8-729-905-50	TRANSISTOR DTC343TS			
Q640	8-729-141-30	TRANSISTOR 2SC3623A-LK			
Q661	8-729-905-50	TRANSISTOR DTC343TS			
Q901	8-729-119-79	TRANSISTOR 2SC2785-FEK			
Q902	8-729-900-61	TRANSISTOR DTA114ES			
Q903	8-729-304-92	TRANSISTOR 2SB649A-C			
Q906	8-729-304-92	TRANSISTOR 2SB649A-C			
Q907	8-729-900-61	TRANSISTOR DTA114ES			
Q908	8-729-119-79	TRANSISTOR 2SA1175-FEK			
Q909	8-729-119-79	TRANSISTOR 2SA1175-FEK			
Q910	8-729-900-61	TRANSISTOR DTA114ES			
R110	1-249-432-11	CARBON	18K	5%	1/4W
R111	1-249-433-11	CARBON	22K	5%	1/4W
R112	1-215-445-00	METAL	10K	1%	1/6W
R113	1-215-445-00	METAL	10K	1%	1/6W
R114	1-215-445-00	METAL	10K	1%	1/6W
R115	1-215-445-00	METAL	10K	1%	1/6W
R116	1-249-434-11	CARBON	27K	5%	1/4W
R118	1-249-417-11	CARBON	1K	5%	1/4W
R119	1-249-421-11	CARBON	2.2K	5%	1/4W
R120	1-249-417-11	CARBON	1K	5%	1/4W
R130	1-249-434-11	CARBON	27K	5%	1/4W
R131	1-249-436-11	CARBON	39K	5%	1/4W
R132	1-249-431-11	CARBON	15K	5%	1/4W
R133	1-247-864-11	CARBON	24K	5%	1/4W
R134	1-249-429-11	CARBON	10K	5%	1/4W
R135	1-249-431-11	CARBON	15K	5%	1/4W
R136	1-247-887-00	CARBON	220K	5%	1/4W
R137	1-249-417-11	CARBON	1K	5%	1/4W
R210	1-249-432-11	CARBON	18K	5%	1/4W
R211	1-249-433-11	CARBON	22K	5%	1/4W
R212	1-215-445-00	METAL	10K	1%	1/6W
R213	1-215-445-00	METAL	10K	1%	1/6W
R214	1-215-445-00	METAL	10K	1%	1/6W
R215	1-215-445-00	METAL	10K	1%	1/6W
R216	1-249-434-11	CARBON	27K	5%	1/4W
R220	1-249-417-11	CARBON	1K	5%	1/4W
R230	1-249-434-11	CARBON	27K	5%	1/4W
R231	1-249-436-11	CARBON	39K	5%	1/4W
R232	1-249-431-11	CARBON	15K	5%	1/4W
R233	1-247-864-11	CARBON	24K	5%	1/4W
R234	1-249-429-11	CARBON	10K	5%	1/4W
R235	1-249-431-11	CARBON	15K	5%	1/4W
R236	1-247-887-00	CARBON	220K	5%	1/4W
R237	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-432-11	CARBON	18K	5%	1/4W
R311	1-249-433-11	CARBON	22K	5%	1/4W
R312	1-215-445-00	METAL	10K	1%	1/6W
R313	1-215-445-00	METAL	10K	1%	1/6W
R314	1-215-445-00	METAL	10K	1%	1/6W
R315	1-215-445-00	METAL	10K	1%	1/6W
R316	1-249-434-11	CARBON	27K	5%	1/4W
R317	1-247-848-11	CARBON	5.1K	5%	1/4W
R318	1-249-434-11	CARBON	27K	5%	1/4W
R319	1-249-429-11	CARBON	10K	5%	1/4W
R320	1-249-417-11	CARBON	1K	5%	1/4W
R330	1-249-434-11	CARBON	27K	5%	1/4W
R331	1-249-436-11	CARBON	39K	5%	1/4W
R332	1-249-431-11	CARBON	15K	5%	1/4W
R333	1-247-864-11	CARBON	24K	5%	1/4W
R334	1-249-429-11	CARBON	10K	5%	1/4W
R335	1-249-431-11	CARBON	15K	5%	1/4W
R336	1-247-887-00	CARBON	220K	5%	1/4W
R337	1-249-417-11	CARBON	1K	5%	1/4W
R410	1-249-432-11	CARBON	18K	5%	1/4W

Ref.No.	Part No.	Description			
R411	1-249-433-11	CARBON	22K	5%	1/4W
R412	1-215-445-00	METAL	10K	1%	1/6W
R413	1-215-445-00	METAL	10K	1%	1/6W
R414	1-215-445-00	METAL	10K	1%	1/6W
R415	1-215-445-00	METAL	10K	1%	1/6W
R416	1-249-434-11	CARBON	27K	5%	1/4W
R417	1-247-848-11	CARBON	5.1K	5%	1/4W
R418	1-249-434-11	CARBON	27K	5%	1/4W
R419	1-249-429-11	CARBON	10K	5%	1/4W
R420	1-249-417-11	CARBON	1K	5%	1/4W
R430	1-249-434-11	CARBON	27K	5%	1/4W
R431	1-249-436-11	CARBON	39K	5%	1/4W
R432	1-249-431-11	CARBON	15K	5%	1/4W
R433	1-247-864-11	CARBON	24K	5%	1/4W
R434	1-249-429-11	CARBON	10K	5%	1/4W
R435	1-249-431-11	CARBON	15K	5%	1/4W
R436	1-247-887-00	CARBON	220K	5%	1/4W
R437	1-249-417-11	CARBON	1K	5%	1/4W
R540	1-249-434-11	CARBON	27K	5%	1/4W
R541	1-249-434-11	CARBON	27K	5%	1/4W
R542	1-249-422-11	CARBON	2.7K	5%	1/4W
R543	1-249-421-11	CARBON	2.2K	5%	1/4W
R560	1-249-428-11	CARBON	8.2K	5%	1/4W
R561	1-249-428-11	CARBON	8.2K	5%	1/4W
R562	1-249-428-11	CARBON	8.2K	5%	1/4W
R563	1-249-428-11	CARBON	8.2K	5%	1/4W
R564	1-249-428-11	CARBON	8.2K	5%	1/4W
R565	1-249-428-11	CARBON	8.2K	5%	1/4W
R566	1-249-428-11	CARBON	8.2K	5%	1/4W
R567	1-249-428-11	CARBON	8.2K	5%	1/4W
R568	1-249-428-11	CARBON	8.2K	5%	1/4W
R569	1-247-854-11	CARBON	9.1K	5%	1/4W
R570	1-247-854-11	CARBON	9.1K	5%	1/4W
R571	1-247-854-11	CARBON	9.1K	5%	1/4W
R572	1-249-441-11	CARBON	100K	5%	1/4W
R573	1-249-437-11	CARBON	47K	5%	1/4W
R574	1-249-429-11	CARBON	10K	5%	1/4W
R575	1-247-860-11	CARBON	16K	5%	1/4W
R576	1-249-417-11	CARBON	1K	5%	1/4W
R577	1-249-429-11	CARBON	10K	5%	1/4W
R640	1-249-434-11	CARBON	27K	5%	1/4W
R641	1-249-434-11	CARBON	27K	5%	1/4W
R642	1-249-422-11	CARBON	2.7K	5%	1/4W
R643	1-249-421-11	CARBON	2.2K	5%	1/4W
R660	1-249-428-11	CARBON	8.2K	5%	1/4W
R661	1-249-428-11	CARBON	8.2K	5%	1/4W
R662	1-249-428-11	CARBON	8.2K	5%	1/4W
R663	1-249-428-11	CARBON	8.2K	5%	1/4W
R664	1-249-428-11	CARBON	8.2K	5%	1/4W
R665	1-249-428-11	CARBON	8.2K	5%	1/4W
R666	1-249-428-11	CARBON	8.2K	5%	1/4W
R667	1-249-428-11	CARBON	8.2K	5%	1/4W
R668	1-249-428-11	CARBON	8.2K	5%	1/4W
R669	1-247-854-11	CARBON	9.1K	5%	1/4W
R670	1-247-854-11	CARBON	9.1K	5%	1/4W
R671	1-247-854-11	CARBON	9.1K	5%	1/4W
R672	1-249-441-11	CARBON	100K	5%	1/4W

Ref.No.	Part No.	Description			
R673	1-249-437-11	CARBON	47K	5%	1/4W
R674	1-249-429-11	CARBON	10K	5%	1/4W
R675	1-247-860-11	CARBON	16K	5%	1/4W
R676	1-249-417-11	CARBON	1K	5%	1/4W
R677	1-249-429-11	CARBON	10K	5%	1/4W
R901	1-249-422-11	CARBON	2.7K	5%	1/4W
R902	1-249-417-11	CARBON	1K	5%	1/4W
R903	1-249-421-11	CARBON	2.2K	5%	1/4W
R906	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-249-417-11	CARBON	1K	5%	1/4W
R911	1-249-411-11	CARBON	330	5%	1/4W
R912	1-249-413-11	CARBON	470	5%	1/4W
R913	1-247-883-00	CARBON	150K	5%	1/4W
R914	1-249-416-11	CARBON	820	5%	1/4W
R915	1-249-417-11	CARBON	1K	5%	1/4W
R916	1-249-429-11	CARBON	10K	5%	1/4W
R917	1-249-413-11	CARBON	470	5%	1/4W
R918	1-249-433-11	CARBON	22K	5%	1/4W
R919	1-249-433-11	CARBON	22K	5%	1/4W
R920	1-249-437-11	CARBON	47K	5%	1/4W
R921	1-249-425-11	CARBON	4.7K	5%	1/4W
R924	1-249-429-11	CARBON	10K	5%	1/4W
R925	1-249-430-11	CARBON	12K	5%	1/4W
R926	1-249-421-11	CARBON	2.2K	5%	1/4W
R927	1-249-429-11	CARBON	10K	5%	1/4W

RV130	1-241-251-11	RES, VAR (FRONT LEVEL)
RV330	1-241-251-11	RES, VAR (REAR LEVEL)
RV540	1-241-250-11	RES, VAR (LOW BOOST)
RV560	1-241-251-11	RES, VAR (SUB WOOFER)
SW130	1-572-492-11	SWITCH, ROTARY (HI-PASS)
SW310	1-570-875-	SWITCH, SLIDE (F&R/R)
SW311	1-572-493-11	SWITCH, SLIDE (ST/MONO)
SW560	1-572-491-11	SWITCH, ROTARY (LOW-PASS)

ACCESSORY & PACKING MATERIAL

	3-752-165-21	MANUAL, INSTRUCTION
	3-336-617-01	BAG, PROTECTION
*	3-362-102-01	CUSHION
*	3-362-103-01	INDIVIDUAL CARTON
	3-752-165-11	(AEP,UK,E).....MANUAL, INSTRUCTION (ENGLISH,SPANISH,GERMAN,CHINESE)
	3-752-165-21	(US,Canadian)...MANUAL, INSTRUCTION (ENGLISH,FRENCH)
	3-752-165-41	(AEP).....MANUAL, INSTRUCTION (FRENCH,DUTCH,SWEDISH,ITALIAN,PORTUGUESE)
	3-752-196-11	(AEP,UK,E)..MANUAL, INSTALLATION/CONNECTION (ENGLISH,SPANISH,GERMAN,CHINESE)
	3-752-196-21	(US,Canadian)...MANUAL, INSTALLATION /CONNECTION (ENGLISH,FRENCH)
	3-752-196-41	(AEP,E)...MANUAL, INSTALLATION/CONNECTION (FRENCH,DUTCH,SWEDISH,ITALIAN,PORTUGUESE)

MOUNTING HARDWARE

501	3-310-655-01	SUPPORT (ND), FITTING
502	X-3315-702-1	SCREW ASSY (25MM), FITTING
503	7-682-261-09	SCREW +K 4X8
504	3-315-736-21	BRACKET, NEW D
505	3-362-342-01	PLATE, TRANSPARENT
506	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT

9-955-992-11

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